DOCUMENT RESUME

ED 232 061 CE 036 760

AUTHOR Nadler, Leonard
TITLE Human Resource Development: The Perspective of Business and Industry. Information Series No. 259.
INSTITUTION ERIC Clearinghouse on Adult, Career, and Vocational Education, Columbus, Ohio.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE 83
CONTRACT 400-81-0035
NOTE 53p.
AVAILABLE FROM National Center Publications, National Center for Research in Vocational Education, 1960 Kenny Road, Columbus, OH 43210 (Order No. IN259).
PUB TYPE Information Analyses - ERIC Information Analysis Products (071) -- Viewpoints (120)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Career Development; *Educational Cooperation; Human Resources; *Job Performance; Job Training; Postsecondary Education; *Professional Education; *Professional Training; *School Business Relationship
IDENTIFIERS *Human Resource Development

ABSTRACT

This paper seeks to describe and analyze human resource development (HRD) from the perspective of business and industry and to identify the role of adult, career, and vocational education in HRD. The author first defines HRD as organized learning experiences in a given period of time to effect the possibility of performance change or growth in the individual, through the learning activity areas of training, education, and development. Distinguishing HRD from other human resource activities, the author next discusses the preparation of HRD practitioners for their possible roles as learning specialists, administrators/managers, and consultants. Academic preparation, public seminars, professional societies' programs, and the networking process are all examined. The paper next looks at the issue of cooperation and linkage between postsecondary institutions and business and industry in providing HRD for employees. The essential argument of this section is that cooperative efforts can dispel mutual misconceptions and provide the widest range of HRD opportunities. The final section looks at the future of HRD through its potential effect on productivity, unemployment, work place alternatives, and work force demographics. The author concludes that higher education institutions can play a major role both in practitioner preparation and program implementation if cooperation with business and industry is seriously pursued. (SK)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Information Series No. 259

ED232061

HUMAN RESOURCE DEVELOPMENT: THE PERSPECTIVE OF BUSINESS AND INDUSTRY

Leonard Nadler
George Washington University

The ERIC Clearinghouse on Adult, Career, and Vocational Education
The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

1983

CG036760

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

THE NATIONAL CENTER MISSION STATEMENT

The National Center for Research in Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The National Center fulfills its mission by:

- o Generating knowledge through research
- o Developing educational programs and products
- o Evaluating individual program needs and outcomes
- o Providing information for national planning and policy
- o Installing educational programs and products
- o Operating information systems and services
- o Conducting leadership development and training programs

For further information contact:

Program Information Office
National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

Telephone: (614) 486-3655 or (800) 848-4815
Cable: CTVOCEDOSU/Columbus, Ohio
Telex: 8104821894

FUNDING INFORMATION

Project Title:	ERIC Clearinghouse on Adult, Career, and Vocational Education
Contract Number:	NIE-C-400-81-0035
Educational Act Under Which the Funds Were Administered:	41 USC 252 (15) and PL 92-318
Source of Contact:	U.S. Department of Education National Institute of Education Washington, D.C. 20208
Contractor:	The National Center for Research in Vocational Education The Ohio State University Columbus, Ohio 43210
Executive Director:	Robert E. Taylor
Project Director:	Juliet V. Miller
Disclaimer:	This publication was prepared pursuant to a contract with the National Institute of Education, U.S. Department of Education. Contractors undertaking such projects under government sponsorship are encouraged to express their judgment in professional and technical matters freely. Points of view or opinions do not, therefore, necessarily represent official National Institute of Education position or policy.
Discrimination Prohibited:	Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal assistance." Title IX of the Education Amendments of 1972 states: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal assistance." The ERIC Clearinghouse project, like every program or activity receiving financial assistance from the U.S. Department of Education, must comply with these laws.

This publication was prepared with funding from the National Institute of Education, U.S. Department of Education, under Contract No. NIE-C-400-81-0025. The opinions expressed in this report do not necessarily reflect the position or policies of NIE or the Department of Education.

TABLE OF CONTENTS

	PAGE
LIST OF FIGURES	v
FOREWORD	vii
EXECUTIVE SUMMARY	ix
WHAT IS HUMAN RESOURCE DEVELOPMENT?	1
Definition	1
Importance of Human Resource Development	5
Areas of Human Resource Development	7
PREPARATION OF HRD PRACTITIONERS	13
Types of HRD Practitioners	13
Academic Preparation	17
Public Seminars	18
Professional Societies	20
Networking	21
COOPERATION AND LINKAGES	23
Perceptions and Misperceptions	23
Secondary Schools	24
Cooperation at the Postsecondary Level	25
Examples of Cooperation	29
THE FUTURE OF HRD	33
Productivity	33
Unemployment	33
Alternative Work Sites	35
Demographics	37
The HRD Practitioner	37
REFERENCES	39
BIBLIOGRAPHY	45

LIST OF FIGURES

Page

Figure 1. Roles of HRD Practitioners 14

Figure 2. Comparison of Models Depicting HRD Practitioner Roles 14

FOREWORD

The Educational Resources Information Center Clearinghouse on Adult, Career, and Vocational Education (ERIC/ACVE) is one of sixteen clearinghouses in a nationwide information system that is funded by the National Institute of Education. One of the functions of the Clearinghouse is to interpret the literature that is entered into the ERIC database. This paper should be of particular interest to university and college faculty members and members of professional associations in the areas of adult, career, and vocational education, as well as human resource development practitioners.

The profession is indebted to Leonard Nadler of George Washington University for his scholarship in the preparation of this paper. Dr. Nadler is Professor of Adult Education and Human Resource Development in the School of Education and Human Development. He is also engaged in providing assistance in individual and organizational development to a variety of private and public organizations. Dr. Nadler has served as a National Vice-President and Director of the International Division of the American Society for Training and Development (ASTD) and is the recipient of the Gordon Bliss Memorial Award of ASTD. Dr. Nadler has published extensively in the areas of human resource development and adult education.

Recognition is also due to Neal Chalofsky, Virginia Polytechnic Institute and State University--Northern Virginia Campus; to Robert L. Smith, East Texas State University; and to Audni Miller-Beach and Roy Butler, the National Center for Research in Vocational Education, for their critical review of the manuscript prior to its final revision and publication. Susan Imel, Assistant Director at the ERIC Clearinghouse on Adult, Career, and Vocational Education, coordinated the publication's development. She was assisted by Sandra Kerka and Judith O. Wagner. Janet Ray and Brenda Hemming served as word processor operators, and editing was performed by Constance Faddis of the National Center's Editorial Services.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

This paper seeks to describe and analyze human resource development (HRD) from the perspective of business and industry and to identify the role of adult, career, and vocational education in HRD. The author first defines HRD as organized learning experiences in a given period of time to effect the possibility of performance change or growth in the individual, through the learning activity areas of training, education, and development. Distinguishing HRD from other human resource activities, the author next discusses the preparation of HRD practitioners for their possible roles as learning specialists, administrators/managers, and consultants. Academic preparation, public seminars, professional societies' programs, and the networking process are all examined. The paper next looks at the issue of cooperation and linkage between postsecondary institutions and business and industry in providing HRD for employees. The essential argument of this section is that cooperative efforts can dispel mutual misconceptions and provide the widest range of HRD opportunities. The final section looks at the future of HRD through its potential effect on productivity, unemployment, work place alternatives, and work force demographics. The author concludes that higher education institutions can play a major role both in practitioner preparation and program implementation if cooperation with business and industry is seriously pursued.

Literature on the topic of human resource development can be found in the ERIC system under the following descriptors and identifiers: *Professional Education; *Professional Training; *Educational Cooperation; *School Business Relationship; *Job Performance; Career Development; Postsecondary Education; Job Training; Human Resources; *Human Resource Development. Asterisks indicate terms having particular relevance.

WHAT IS HUMAN RESOURCE DEVELOPMENT?

One purpose of this publication is to describe and analyze human resource development (HRD) from the perspective of business and industry. This is not an easy task, for the perceptions of HRD vary greatly. It is possible, however, to identify the areas of agreement and those areas in which there is conflict or controversy. Another purpose is to identify how those concerned with adult, career, and vocational learning programs can be involved in the HRD effort.

Definition

It would be comfortable and much less confusing if it were possible to provide one simple definition of human resource development. But, as will be discussed later, this is not possible.

There are some general understandings, however, that lead to a definition that has achieved some common agreement. The basic definition was first published in 1970 (Nadler 1979a) and has been refined since then. Human resource development can be defined as--

- o organized learning experiences,
- o in a given period of time,
- o to bring about the possibility of performance change or general growth for the individual within an organization.

Note that the emphasis of HRD is on learning, and that is why it should be of concern to those who are in the field of learning even if they are not in business and industry. It is interesting to note that in 1981, the American Society for Training and Development (ASTD) approved a definition in connection with a competency study it is conducting. As defined by ASTD, HRD is:

> Identifying, assessing, and--through planned learning--helping develop key competencies (knowledge, skill, attitudes) which enable individuals to perform current or future jobs.* (McLagan 1982)

For a variety of reasons, ASTD still refers to this as "training and development" rather than HRD.

---

*Emphasis added by author.

Let us look at the first definition in more depth. The phrase organized learning experiences indicates that the focus is on learning and includes more than just one experience. Although HRD must be organized, it includes both formal and informal learning. Formal learning is understood by most. Informal learning frequently occurs on the job site and is referred to as on-the-job training (OJT). Such learning is directed by the supervisor or by somebody else who is designated by the supervisor, and is rarely reported in the statistics on HRD. There are also other kinds of informal learning experiences when one views the organization as a learning community (Anderson 1980).

The given period of time does not refer to a semester or to a similar academic determination. Rather, given the objectives of HRD, there are people in the organization who want to know what learning is achieved and when they can expect performance to change. There is a great concern in HRD regarding evaluation. The specific time period allows all concerned to agree about when the results of the learning are to be evaluated.

The last item of the definition contains two elements. Note that it deals first with the possibility of performance change. HRD, as with other forms of adult learning, cannot promise that adults will change their performance or behavior as the result of a learning experience. Particularly in business and industry, there are too many other factors that affect performance. All that an adult learning experience can do is to provide the learner with additional options for behavior and performance.

The second element of that part of the definition deals with general growth for the individual. Some organizations provide their employees with learning experiences that are in this general category. One reason is to keep the members of their work force in a continuous learning posture so that they will be ready to grow and change with the organization. Another purpose is to recognize the need of most individuals to be learning, growing, and changing continually.

Need for a Definition

Why is it so necessary to arrive at a common definition of HRD? Without at least the minimal agreement that is provided by such a definition, it is not possible to discuss HRD coherently. Over the past fifteen years, the term HRD has grown in usage, but not all people use it the same way. Therefore, if concerned people are to communicate with each other and with organizations, it is necessary to state what is meant by HRD.

Part of the confusion about the definition emerges from the history of the field. (A good history still remains to be written, a project that could be the basis for at least one research study.) Essentially, learning related to work has been with us since there has been work, but it is only since the advent of the industrial revolution that HRD has become significant.

Since 1970, interest in human resources in business and industry has accelerated. As can be expected, this has brought numerous people into the field from a variety of backgrounds. People entering HRD have naturally

brought with them the terminology from their own fields, which has contributed to the confusion about a definition.

There are those who have been in the HRD field for many years and still hold to the archaic designation of "training and development." The difficulty with this label is that "education" is missing, and neither of the other two terms has been defined. Also, in the eyes of many leaders in business and industry, "training" is what is done only for lower-level employees.

Another factor that contributes to the confusion is that HRD, at present, lacks an undergraduate academic discipline. As a result, practitioners coming from a variety of backgrounds do not have a common academic experience that defines the field. Most other fields in the human resource area do have at least some agreement about what constitutes a degree program at the undergraduate level. At the graduate level, the number of schools offering degrees in HRD was extremely limited until the late 1970s. As these academic programs increase, a more generally accepted definition may emerge.

Other Human Resource Activities

To put HRD into perspective, it is essential to look at other human resource activities. Before 1970, the term "human resources" was rarely used. Today, we find that organizations have individuals bearing the title of director of human resources or vice-president for human resources.

HRD is not alone in having difficulties with definitions. In the entire field of human resources, there is a woeful lack of agreement as to the terms and areas of concern. Perhaps this lack of definition has some benefits in allowing organizations to respond more rapidly to change. A major disadvantage is that it makes it extremely difficult to compare human resource activities across organizational lines. Therefore, the following discussion and designation of human resource activities must be seen as general rather than specific.

The term that has gained the most prominence is human resource management (HRM). Unfortunately, HRM is used in two different ways. The most common usage refers to such activities as recruitment, selection, placement, compensation, and appraisal. These activities are those usually found under the direction of the personnel department. There is a pronounced movement away from use of the term "personnel" and towards use of the term "human resource management."

The difficulty with the term human resource management is that most people performing that function do not manage the human resources. Management is a function performed by supervisors and managers. Although this has caused some confusion, the term HRM is gaining acceptance. In fact, it appears that some people are now using HRM as the designation for all the human resource functions; for example, an individual heading up the human resource unit in an organization is frequently known as the vice-president for HRM.

The other human resource functions do not group themselves as conveniently. At one time, the term human resource environment served as the umbrella for such activities as organizational development, job enrichment, employee assistance, and so forth. The increased concern with human resources has made the term human resource environment inadequate for the wide variety of activities that are now found in business and industry and that previously would have been subsumed under "personnel."

A new and growing area is human resource planning, which encompasses replacement schedules, career development, and the relationship of human resources to the organization's strategic planning.

There are other human resource activities that do not fall into any single category and can be found in a variety of places in an organization. For example, increased concern about the welfare of employees is evidenced by the increase in wellness programs. These can be in either the physical or mental areas. The terms wellness, fitness, and employee assistance are also used interchangeably, though the trend at present is toward the word "wellness." The National Industrial Recreation Association (Pyle 1979) reports that nearly fifty thousand companies have such programs. Examples of organizational interest in providing physical wellness programs include building health facilities on site or contracting for space where employees can engage in physical fitness programs.

To help employees pursue mental wellness, some organizations provide increased counseling services in non-job-related areas. These programs, called employee assistance programs, deal with drug and alcohol abuse as well as other family-related problems. Some organizations purchase a variety of "stress management" programs to improve performance on the job as well as to help employees become more adept at dealing with non-job-related stress.

There is still significant disagreement as to whether union-labor relations belong within the human resource area. In organizations that view such a relationship as strictly a legal one, lawyers are retained to manage that function. Other organizations see union relationships as an important broader aspect of individual and organizational cooperation or conflict and therefore do include relations with the union within the human resources function.

If the trend continues--and there is every indication that it will--concern about human resources will continue to increase. Therefore, more business and industry activities, as well as new human resource concerns that are unknown today, will be situated in the HRD area with companies.

Use of Terms

Obviously, it is essential to be very clear about how HRD terms are used here. In this paper, human resource development (HRD) refers to the definition cited earlier: (1) organized learning experiences (2) in a given period of time (3) to bring about the possibility of change or general growth for the individual within an organization. Later in this paper the term will be amplified by discussing identifiable activity areas within HRD.

Importance of Human Resource Development

Although HRD is paid for by the employer and is generally conducted during work hours, there are benefits for the employer, the employee, and society in general.

Usefulness to the Individual

When discussing HRD, the focus is on those people who are already in the work force, or who are eligible to be in the work force. Put another way, it deals with those who are no longer required by law to attend school. These laws vary from state to state and, unfortunately, we even have one state that has no legal requirement that youth must attend school at all.

This does not mean that the private sector (business and industry) should not be concerned or involved with school-age people. It has been suggested that work habits are formed as early as the fourth grade. Certainly, as students move through our school systems, many of them are increasingly concerned about their future economic roles in our society.

Business and industry leaders complain about the attitudes that undergraduates acquire about work while in college. Although that may be a legitimate concern, these attitudes are generally formed by the time an individual enters college. Obviously, this concern should be addressed in the lower levels of school. This is an area where HRD people can work with the schools for everybody's benefit. Consider the problems that HRD people may encounter when those students eventually enter the work force as new employees. How to develop and maintain the necessary linkages between education and business and industry will be described in a later section of this publication.

After leaving school and entering the work force, individuals have a significant need for learning within the framework of HRD. Of course, adults should not rely only on their employing organization for learning programs. As is evident, however, adults spend the bulk of their nonsleeping hours involved in work situations. Work brings problems, but there is nothing wrong with that, as long as the organization provides the resources needed to solve the problems. There are many problems that can be addressed in learning situations, and business and industry should provide such learning experiences for their employees to help solve those problems. In many instances, that learning is of benefit to the individual as well as to the organization.

Individuals also have a need for personal growth. Most of the studies related to job satisfaction indicate that the single most important factor is the opportunity for an individual to grow on the job. Until quite recently, organizations did little to meet this need. There is an increasing movement in business and industry to provide learning experiences that are not necessarily job-related and are more in the area of personal growth. Of course, when there is a depression or a recession, business and industry are less likely to provide financial resources for non-job-related learning.

In different societies there are different norms about job mobility. In some, such as in Japan, the movement of employees from one company to another has been frowned upon (Nadler 1965). Today, there are those who suggest that this practice of discouraging mobility be adopted in the United States, as described in Theory Z (Ouchi 1981). Some economists suggest that the practice of providing learning for employees can increase their mobility and, therefore, should be considered uneconomical (Berg 1970).

In an industrial democracy as well as in a political one, the concept exists that the individual should be free to choose an employer, and free to leave that employer without any prejudice. It is highly probable that some HRD does provide for individual growth, and that when an employer cannot subsequently meet the increased expectations of an individual, that individual may move to another employer.

In summary, HRD is important to individuals in the early acquisition of work habits and attitudes, the resolution of problems in their work situations, the achievement of personal growth objectives, and increased job mobility.

Usefulness to Organizations

Organizational use of HRD. There are many ways to look at organizations in terms of HRD. One approach is to use a variation of a model suggested by Malcolm Knowles (1970) that describes adult education activities in terms of the needs and goals of the institution. If HRD is viewed in terms of organizational goals and needs, there are three ways of describing its use: (1) the provision of HRD is the major goal of the organization; (2) HRD is used in the organization to reach organizational objectives; and (3) HRD is used to improve employee performance.

The first use of HRD includes those organizations that are providers; that is, their basic purpose is to provide learning, generally for nonemployees. Providers are usually schools, colleges, and universities. For the most part, business and industry are not involved in this area. Of course, it can be argued that private schools (sometimes called proprietary schools) are in business. However, their function is to provide learning--their product is learning for nonemployees.

Also in this first category are organizations that are incorrectly referred to as "consultants." Many of these organizations do not consult, but rather provide learning programs for clients who are not employees. Some of these programs are packaged, while others are custom designed for the needs of the learners in the client system.

More recently, some business and industry organizations have provided learning as one of their products. Included in this category are IBM, which offers a master's degree in management science in New York State; Arthur D. Little's Management Education Institute, which offers a master's degree in the science of management; the Bell System Center for Technical Education, which

offers programs to those outside the Bell System; Massachusetts General Hospital's Institute of Health Professions, which offers master's degrees in various areas in the health professions; and the Wang Institute of Graduate Studies (founded by Wang Laboratories), which offers a master's degree in software engineering. There are also companies that have found it economically beneficial to offer their HRD products outside the company, (e.g., Xerox Learning Corporation and Westinghouse Learning). In all these cases, however, the parent company is not primarily in the business of providing learning for nonemployees (Watkins 1983).

There are those organizations that use HRD to reach organizational objectives. The most common example is in high technology areas, where companies provide HRD to customers so that their own products can be used more efficiently. For example, for years the Bell System provided HRD programs for commercial telephone users. Today, automobile manufacturers spend large sums to provide training for the mechanics (who are not their employees) who service their products through local independent dealers.

By far, the largest use of HRD programs in organizations is to improve performance of employees. There are many reasons, ranging from improving product quality to adjusting to new technologies. These learning programs are necessary for all employees at all levels of the organization. Some programs are designed to improve present performance, whereas others deal with anticipated performance. There are HRD programs that only peripherally contribute to improved performance. The range of programs can be extensive when organizations use HRD to improve performance.

The place of HRD in the organization. There is another organizational aspect of HRD that must be explored. This arises when an HRD person is given a questionnaire that asks, "How many people are in your unit?" "How many people do you supervise?" "What is the size of your budget?" All of these questions ignore how HRD is placed in the organization. There are centralized HRD units and decentralized ones. In some organizations, there many be an HRD person in an advisory position at the highest level, while the HRD programs implemented at lower levels of the organization have no direct relationship to the higher-level HRD advisor.

In a similar fashion, the budget for HRD may be in the hands of the line supervisors or plant manager, rather than in a separate HRD budget. This does not mean that HRD is not trusted with a budget. Rather, it reflects a particular philosophy that says that HRD is in the business of helping others. If the "others" are not prepared to provide financial resources for HRD, perhaps there should not be any!

Areas of Human Resource Development

Up to this point, HRD has been viewed as the totality of the learning that takes place in the organization. Within this context there are three different kinds of learning activities. It is important to make the distinction among these if the HRD program is to be useful to the individual and to the organization.

Activity Areas

HRD can be divided into three learning activity areas, as follows:

- o Training, related to the employee's current job
- o Education, preparation for a future job
- o Development, directed towards individual and organizational growth

The terms training, education, and development have many meanings, depending on who is using them. It is not the label that is the distinguishing element, but rather the purpose and its implications (Nadler 1981).

Although there is no universal agreement on the individual terms, there are these three different kinds of learning activity areas, distinguishable by their objectives for a particular individual in a specific organization. When such distinctions are not made, there can be considerable confusion about the mutual expectations of the learner and the organization (Nadler 1974).

HRD programs may apply to all jobs at all levels in the work force. Almost all of these programs include the three activity areas mentioned. For example, HRD programs for managers include the following activities:

- o Management training--to improve a manager's present performance
- o Management education--to prepare a manager to move to a higher level of management, or to the executive level
- o Management development--to broaden the managers as people, with no direct relation to the present or future job

Unfortunately, the terms management education or management development are too often used interchangeably and without definition. As a result, it is usually not possible to identify the purpose of a learning program from such vague designations.

Program Areas

The program areas of HRD cover essentially every aspect of performance in the work place. There are many different ways to develop a taxonomy for the total field, but none has yet been developed that appears to present all the dimensions involved. To grasp some of the variation and complexity of HRD, several major areas are discussed next. This review is not meant to be comprehensive, but rather to be illustrative.

Professional programs. The most common HRD area relates to professionals. This area is sometimes also referred to as continuing professional education. The term "professional" is used in a very broad sense, but usually encompasses those who have had some academic education in their field before they started

full-time employment in that area. Among the disciplines found in this program area are medicine, engineering, law, and accounting.

There has been a movement in recent years toward requiring professionals to engage in learning beyond their basic academic education, in order to retain their license or certification. This has resulted in mandatory HRD programs, an effort that has become the target of some who contend that it is undesirable to force people to learn. Some critics also suggest that one reason for this mandatory learning is to increase enrollments in higher education institutions.

No matter what the reason or motivation, HRD is as necessary for professionals as it is for other people in the work force. Continuing increases in new knowledge impose a requirement on professionals to keep up to date (i.e., through training) as well as prepare themselves (i.e., through education) for future positions, frequently as administrators and managers.

Development--non-job-related learning experience--is also provided, though not as frequently as it should be. There are some exceptions. Bell Laboratories provides colloquia, at company expense and on company time. As reported in the Wall Street Journal (Asinof 1982), few of the topics have any direct connection to research at Bell Labs. Rather, the colloquia are meant to provide a glimpse of a scientific area that Bell Labs' researchers have not yet tackled.

Skill and technical programs. Another spin-off of the changing world of work has been the increased need for skill programs. These programs usually include office skills as well as those basic to many jobs in the work force. They are different from technical HRD programs that focus on the competencies involved in technical jobs, although some individuals do not perceive the two types of programs as different. Paulsen (1981), for example, suggests that a skill program is one that lasts for one year or less. It is doubtful, however, that there would be complete agreement on this distinction.

It is significant that there has recently been a resurgence in technical programs, due to a number of reasons. Given the impact of discoveries and inventions in the 1970s, the world of work has become more "technological" than in the past. Many traditional jobs at the lower end of the employment spectrum have given way to automation, increasing the need for more technical skills among the blue-collar work force. Another reason for the resurgence in technical programs relates to increased interest in productivity. Better educated, entering workers who are provided with continual training to enable them to keep up with the changes in production processes can help increase productivity.

Managerial programs. Although managers are not the major part of the work force, studies show that more attention and financial resources are directed towards them than to any other group. For purposes of this paper, the term "managers" includes supervisors and executives. Obviously, members of the managerial group are all key people--the decision makers--and keeping them current through HRD programs is essential for every organization. The term "management development" is frequently used to apply to HRD programs designed

for managers, but it is not wholly accurate or descriptive. Managers have a need for all of the activity areas of HRD (i.e., training, education, and development), and there should be programs to provide all three.

Compensatory programs. One group of HRD programs may be labelled compensatory. Compensatory programs are those offered to minorities or to others who have not been a regular part of the work force, to enable them to participate more fully. In the early 1970s, high school dropouts were studied. The results of these studies provided insights that were subsequently of great help in developing HRD programs for high school dropouts as they entered the work force (Granger 1976).

Many compensatory programs were funded by the U.S. government through such legislation as the Manpower Development and Training Act, the Comprehensive Employment and Training Act, and the Economic Opportunity Act. As the federal government has reduced its funding of these programs, many of the compensatory programs have shrunk or disappeared.

Sales programs. Another significant HRD area can be found in sales programs, which essentially provide sales-related training. Individuals are hired for sales positions and then training is provided, usually by the district or field manager. There is an increasing trend toward using full-time HRD people to provide that training, although in some organizations this has been the practice for many years. HRD people in the area of sales have a professional organization, the National Society of Sales Training Executives. There is also a Sales and Marketing Division within ASTD.

Some critics maintain that business and industry do not provide sufficient education for their salespeople. The common practice is to identify an employee and assign that employee to a sales job. After that, the new employee is trained. This is probably based on an old notion that salespeople are born, not made, and that it is not possible to teach a person to sell. Of course, this adage has proven to be woefully invalid in the world of today, but it is still believed by some salespeople.

This notion has been exacerbated by the inadequacy of sales education in secondary as well as postsecondary institutions. There are some courses in distributive education and in marketing to be found in postsecondary institutions, but such courses have been criticized for not emphasizing selling skills.

Worker programs. Another area that is too often not included as part of HRD is worker programs. These programs are frequently called "worker education," though they do focus on more than just that one activity area. The term refers to HRD programs provided by unions for their employees and members. Since unions are generally not included in the designation of business and industry, worker HRD programs are too often overlooked. Realistically, these are HRD programs for people who are in the world of work and who, as such, should be of direct concern to business and industry. On the other hand, it is only in recent years that unions have become concerned about and involved in HRD programs that are sponsored by the employers for union members.

Some of the early worker HRD programs in the United States took place in universities. There is actually a long history of cooperation between unions and the field of human resource development in adult education (Anderson 1981). Today, most of the large unions have their own HRD staff and the AFL-CIO has a person responsible for HRD on its national staff. There are labor institutes, such as the George Meany Labor Education Center, and specialized ones within various industries.

Worker programs provide both training and education. For example, in 1982, the Machinists Union decided to use shop stewards to monitor the introduction of new technology into the work place. Training programs were provided so that the shop stewards would have the competency for this additional task. In New York, a public service union explored the necessity of education for workers who would have to move from industrial jobs to service occupations (Gotbaum 1979).

Human relations programs. During the 1950s there were extensive human relations programs that focused on getting people to like each other. The assumption was that if people liked each other, they would work better. When increased productivity did not result from these programs, disillusionment set in and a backlash resulted that almost destroyed any good that human relations programs may have achieved. Since that time, numerous other programs have been developed that use the title of human relations, but they usually mean different things. The focus of such programs ranges from interpersonal relations among executives to learning how to work with new minority groups entering the work force.

Volunteer programs. The United States is unique in that it has a long and strong tradition of volunteering. This tradition has necessitated HRD for volunteers. There are numerous community organizations, as well as national organizations (e.g., American Red Cross, American Heart Association, Lions International), that rely on volunteers to achieve their organizational objectives. The training and education of these volunteers is crucial to the work of the organization. Although it is unusual to find voluntary organizations providing development, merely participating in the activities of the organization may well meet the developmental needs of some volunteers.

International programs. At one time international HRD programs were only provided for some American employees assigned to work outside the United States. Such programs have usually included information about the culture and society of the host country, instruction in the basics of the language (or at least some greetings), and instruction in the do's and don'ts of functioning in that country. Some organizations with more experience in the international field also include the family in such programs. In the early 1970s, there was a decrease in the flow of U.S. citizens going to work overseas, and some of these programs were reduced, while others were completely eliminated. Today, various private companies are hired by corporations to provide the appropriate learning for employees being sent overseas to work.

As the flow of American citizens working abroad has diminished, there have been significant increases in foreigners coming to work in the United States. These individuals generally are not immigrants or guest workers, but rather

managers and executives, sent to the United States by foreign companies who have purchased companies here. Therefore, in the United States today, the need for international learning can be found outside our own front door.

Cross-cultural programs. Another HRD area often associated with international programs is called cross-cultural. Although there is some overlap between the two types, there is, however, a significant difference. Most people in the United States today could benefit from cross-cultural learning experiences because of the movement away from the concept of the America as the "melting pot" (i.e., each U.S. citizen acting the same way) toward "cultural pluralism" (i.e., recognizing that the country is composed of a variety of different cultural groups).

PREPARATION OF HRD PRACTITIONERS

To understand the field of HRD, it is also necessary to understand its practitioners. This is not easy for, as indicated earlier, there is no single undergraduate background, so HRD personnel come from various points of the academic compass. Indeed, many in the field have no formal academic background and bring to the situation only what they have learned in the work place.

Models are now emerging that describe the field (Nadler 1980a). Some of these current models go back to earlier models and research and have been updated to reflect the changes in the HRD field during the 1970s (Nadler 1980b). As the field has gained more recognition, other efforts are now being made to create additional models. This is a healthy movement, for the HRD field lacks models that can be used to communicate with leaders in business and industry, as well as with leaders in higher education institutions.

Types of HRD Practitioners

Types of HRD Practitioner Roles

One way of looking at HRD people is through their roles. That is, what do they do? Figure 1 depicts one model of HRD practitioner roles as conceptualized by Nadler (1980b, p. 43). This model has been built upon by others, notably by the Ontario Society for Training and Development and the U.S. Civil Service Commission (now the U.S. Office of Personnel Management).*

In addition, the American Society for Training and Development completed a study (commonly referred to as the "competency study" or the "McLagan study") that identified fifteen key training and development roles (McLagan 1982). Comparisons between the ASTD model and the Nadler model as shown in figure 2, reveal a number of items labeled "no comparable role." The role of individual development counselor raises the issue of the best place for the organization to provide the function of individual career counseling. One point of view is that, to be effective, the career counselor must be in a position to know where the job openings will occur. Otherwise, the counseling can effectively direct the employee out of the organization. Generally, the information on staffing and future vacancies is not generated within the HRD unit, though its staff have some of that information. For this and other reasons, it is probably best to have the counseling done in another unit.

---

*Information based on author's personal knowledge.

Learning Specialist

Facilitator of learning
Curriculum builder (designer of programs)
Instructional strategist

Administrator/Manager

Developer of HRD personnel
Supervisor of HRD programs
Maintainer of relations
Arranger of facilities and finance

Consultant

Advocate
Stimulator of personnel
Change agent

Figure 1. Roles of HRD Practitioners

ASTD Model	Nadler Model
Evaluator	Supervisor of programs
Group facilitator	Facilitator of learning
Individual development counselor	(No comparable role)
Instructional writer	Instructional strategist
Instructor	Facilitator of learning
Manager of training and development	Administrator/Manager
Marketer	(No comparable role)
Media specialist	Instructional strategist
Needs analyst	Designer of programs
Program administrator	Arranger of facilities and finance
Program designer	Designer of programs
Strategist	(No comparable role)
Task analyst	Designer of programs
Theoretician	(No comparable role)
Transfer agent	Supervisor of programs

Figure 2. Comparison of Models Depicting HRD Practitioner Roles

The role of marketer carries with it some assumptions about the purpose of HRD in the organization. Generally, it can be said that HRD should be an effective management tool to solve present or anticipated problems. If so, then "selling" (as used in the ASTD model) is inappropriate. If the HRD unit engages in selling, its staff can expect to be treated as salespeople, with the usual sales resistance that occurs. If the HRD unit is viewed as a management resource for solving problems, selling is obviously not necessary. Note, however, that in the Nadler model there is the subrole of maintainer of relations, which does not appear in the ASTD model.

What the ASTD model calls a theoretician is more commonly referred to as a researcher. Although this role is important, there are too few organizations prepared to pay somebody to devote a significant amount of time to that activity. In some large organizations (e.g., Xerox, IBM, Ford) there have been research units in the past, and it is hoped that they will be continued and even be expanded, as there is much about HRD-related activities yet to be learned.

It is important to know the self-image of a particular HRD person in relation to this or some similar model. While it is not possible in this brief paper to go into a complete discussion of each of the roles and subroles in Nadler's model, they can be examined briefly.

The learning specialist is concerned with designing the learning experience and delivering it. In the past, the learning specialist role was the traditional entering role in the HRD field. This is not as common today, as people are entering HRD in other roles. The learning specialist role, however, is the one that is best known and is still important. The impact of technology, as well as of other factors (discussed later in this paper), is causing significant changes in how this role is being performed and certainly in how it will be done in the future.

The role of administrator/manager is becoming more significant than it has been in the past. The increased concern about human resources in general has served to bring this role to the attention of leaders in business and industry. One result has been an upgrading of this role in the perceptions of those leaders.

The role of consultant was the last to evolve, emerging in about the late 1950s. This role did not really become significant until the mid-1970s, and is still emerging. Internal HRD consultants are generally located at fairly high levels in the organization. They provide consultation in HRD areas, with the actual delivery of HRD programs resting in other parts of the organization.

In addition to these readily identifiable roles, new ones are evolving. At this time, there is a mixture of what some HRD practitioners would like to do versus the reality of what business and industry will pay for. A prime example is that of researcher.

New roles continue to emerge, while existing roles and subroles change. That is the nature of the work place today and probably even more change will come about in the near future.

At one time, it may have been possible for one HRD person to fill all of these roles. Today, it is unusual to find such a person. Rather, the tendency is for individuals to specialize. This model and others provide HRD people with a way of looking at their careers in the HRD field (Chalofsky and Lincoln 1983).

Types of HRD Practitioner Categories

Another way of looking at people in HRD is by categories (Nadler 1980b, p. 61). These categories are based on earlier research that was not related to HRD but that has been applied to the HRD field, as follows:

- Category I--professionally identified
- Category II--organizationally identified
- Category III--collateral duties

Those practitioners who are in category I, the professionally identified, view HRD as their career. Of course, the work place has changed, so that many individuals no longer speak in terms of lifetime careers. However, individuals in category I are those who have been in HRD for a period of time and expect to stay in the field for the next several years.

Those in category II, the organizationally identified people, see their careers as working for a particular organization, but--just for the present time--they are assigned to HRD. This type of assignment is not uncommon in large organizations in business and industry, as well as in government. Large organizations (e.g., IBM, Xerox, General Motors, Ford) pride themselves on having employees who are part of the organization, who look forward to long-term employment with those organizations. Although some are specialists, as there must be in a technological society, others are generalists.

Category II individuals are usually found in management. It is common practice to take existing managers and rotate them through various parts of the organization. The HRD unit is one of the places to which they are rotated. A limitation, however, is that frequently these category II people know little about adult learning, though they are quite adept at managing. To do a good job as a category II person in an HRD position, individuals need to know quite a bit about learning, but they do not need to develop competence as learning specialists.

Individuals in category III, the collateral duties people, are those members of the organization who are not in either of the first two categories, but who conduct learning activities as some part of their job. This group is extremely large, but some subgroups can be identified. A familiar subgroup consists of those people in the human resource management (personnel) area,

who are sometimes called upon to conduct learning experiences, although this task is not a basic part of their job. The same applies to similar staff people in areas such as occupational health and safety, and in equal employment opportunity.

Another large subgroup in category III consists of the line managers and supervisors who are expected to do some instruction of their subordinates. They become involved in HRD for only brief periods of time, and by no means is it their major role in the organization.

It is important for people involved in HRD to identify themselves by role and category. Their jobs may change, and their categories may change--but then, their learning needs will change as well.

Academic Preparation

The discussion in this section is focused essentially on those individuals in category I--the professionally identified HRD people. People in the other categories may find it counterproductive to their careers to have a degree in HRD. It is not that people in the other categories have no learning needs--they do; but their learning needs are generally met by certificate programs or other activities (described in a different section of this publication). The focus in this section relates to the academic experiences for the category I people.

As noted earlier, few of those in HRD today have had academic preparation in the field. There are some who have had undergraduate or graduate study in the field of education or one of the behavioral sciences. As HRD has become more accepted as a special field, many more universities have begun offering degrees in HRD, though the ASTD listing of HRD degree programs does not provide any criteria for inclusion in the directory other than submission by a college, university, or others who offer a degree they choose to call HRD (ASTD Directory of Academic Programs 1983).

The root of the problem is that there is as yet no agreement on the core of knowledge that should constitute a degree program in HRD. What is taught in various institutions tends to represent the particular interests of those in charge. Very few use any models (McMahon 1982); rather, they offer courses that the faculty think will generate a sufficient number of students to warrant the effort.

The programs usually offered can be grouped into two categories. The first is for those planning to enter the field after completing undergraduate study; that is, those who seek education to prepare themselves for a future job in HRD. These programs are few in number, at present, and for a very good reason. For the most part, employers in business and industry do not place people in HRD positions who do not have previous work experience of some kind. Attempts to bridge this gap through internships have met with varying success (Fey 1981).

During the 1970s, students who would have become school teachers began to move into HRD positions. Some colleges see this trend as a natural movement and have built their programs accordingly (Carlson 1980).

Many of these programs are not really human resource development, but human services programs. Human services relates to a much broader area and includes many organizations other than business and industry. Some higher education institutions have worked diligently to build bridges from their programs into business and industry, but there are few notable successes. Within a human services program, there can be a concentration in HRD, but it requires faculty who have experience and understanding of business and industry.

Most of the HRD academic programs are designed for people already in the field and are generally offered at the graduate level. For most students, pursuing a degree in HRD represents training. There are, however, some entering universities at the graduate level with no HRD experience or current job in HRD, and for them it is education. The types of learning experiences, therefore, must be organized differently for students with these two different types of needs.

An increasing number of HRD academic programs are being implemented in schools or departments of education, due to growing recognition that HRD is concerned with learning. Individual courses, though usually not degree programs, can be found in many different departments and schools in universities.

The training and education of category I HRD people should be an extremely important focus for higher education institutions, in addition to providing learning experiences for people in the other categories.

Public Seminars

Many HRD people, in both category I and category II, rely on public seminars for their training in HRD. Public seminars are learning experiences offered by a variety of sponsors to anybody in the general public who wishes to attend and who can pay. The sponsors represent a wide variety of sources.

Some membership organizations, such as the American Society for Public Administration and the American Chemical Association, are only peripherally related to HRD, but offer public seminars. HRD professional societies are discussed in a later section of this paper.

Public seminars are also offered by individuals. There is no way to determine quality control in advance except through information that comes by word of mouth. Some public seminars sponsored by individuals are of exceptionally high quality while others are a waste of time and money.

There are some companies, both large and small, that offer public seminars for HRD people. Some of these organizations specialize in the HRD area, while others find that their products or staff (not originally intended for HRD) can be used to offer seminars to HRD people.

A newer trend is the conference-cum-public seminar offered by publishers. Notable among these are those offered by Training magazine and by University Associates. These conferences include a variety of practitioners and vendors, covering a wide range of topics. The conference offered by Training magazine also features an exhibit by a great number of suppliers of HRD goods and services.

Of course, there are also public seminars offered by higher education institutions. These programs are generally not related to a degree program and are frequently offered through the extension division of the sponsoring institutions. Community colleges may offer public seminars through community services or a similar part of the college organization.

Higher education institutions have, on occasion, used individuals and companies to provide public seminars for HRD people. Frequently, various faculty members have reacted negatively when individuals not associated with the institution were used to provide seminars under its auspices. In such instances, the faculty has shunned the activity as being nonacademic and not worthy of concern.

All of the above delivery systems have some common features. Usually, some kind of certificate of completion is awarded to participants. Although this type of certificate may appear to be meaningless, to some participants in those public seminars that certificate may be one of the few overt signs they have that demonstrates success in a formal learning experience.

Some sponsors of public seminars offer continuing education units (CEUs). These programs are usually of short duration, a week or less, but the CEU is flexible enough to accommodate short-term learning experiences. (One CEU equals ten hours of direct contact with an instructor, and credit can be given in terms of tenths, i.e., 4.5 CEUs are the equivalent of forty-five hours of instruction).

There are public seminars that are offered for only one day. Realistically, such programs deal with only one or two aspects of the roles of the human resource developer (e.g., needs analysis). This specialization allows HRD people to attend only those seminars that meet their particular needs at that time. When the public seminar is offered as a profit-making activity, as it is in most cases, the brochures that are sent out to advertise the event tend to indicate that this particular seminar will give the participant competency in that area. Congruency between the stated objectives and the amount of time allotted is not always possible. Some of the public seminars have been criticized for offering to provide more learning than is possible, considering the limitations of that approach.

A few sponsors offer more extensive programs, though these are usually delivered in short modules, such as during a weekend. Participants return for several scheduled weekends to qualify for the certificate of successful completion of the program.

Professional Societies

Any listing of professional societies will, of course, relate to the views one holds of the field of HRD. The leading organization within the models discussed in this publication is the American Society for Training and Development (ASTD). Another, smaller organization is the National Society for Performance and Instruction (NSPI).

On the periphery of the HRD field, until recently, has been the American Association for Adult and Continuing Education (AAACE), which was formed in 1982 as a result of the merger of the Adult Education Association of the U.S.A. (AEA) and the National Association for Public, Continuing, and Adult Education. Within AAACE is the Commission of Professors of Adult Education (CPAE), whose members have been involved in long-running debates as to whether they should focus on liberal and community education or be involved in HRD. In recent years the commission members have begun to consider HRD as a matter of serious concern. A number of the members of the CPAE have joined ASTD and have become more directly involved in HRD.

In 1958 a group of about ten people met at the IBM Club in Binghamton, New York, to discuss how ASTD and the Adult Education Association could work together, and perhaps even merge. Unfortunately, no working arrangement could be found that was acceptable to both groups. Out of that meeting, however, emerged an AEA special interest group concerned with HRD that still exists today in AAACE.

In many organizations it is possible to find people who contend that their members are directly involved in HRD, while others resist that notion. Regardless of what it is called there is a decided movement towards concern with adult learning in the work place (i.e., HRD). For example, the International Council on Education for Teaching devoted time at their 1981 World Assembly to discuss the relationship that should exist between educational systems and the business world (Neuschel, Fafunwa, Bigala, and Petracek 1981).

These professional societies provide numerous training and education activities for their members who are involved in HRD. The most common is the annual conference, a significant activity for membership organizations. The bulk of the offerings at such annual conferences are designed as learning experiences, though sometimes they fall short of that goal. These conferences feature exhibits of products and services for HRD people. As one attends these conferences and exhibits over the years, it is possible to see how the materials and devices available for learning have become more sophisticated.

Some of the societies also offer public seminars. ASTD has been quite active in this area, even to the point of being criticized for being in competition with training and education services offered by some of its own members.

Another significant learning resource is the publications issued by the various societies. In this area, to date, ASTD again has provided more leadership than the other organizations.

Networking

There is an interesting development--known as networking--that cuts across all of the groups, societies, associations, and publications discussed above. In any organized sense, networking started in the late 1960s. It arose from the need of various individuals to be able to sit and talk to other professionals within a framework that they developed. The result was the establishment of a learning community wherein each member is free to share but also is not compelled to do so.

In a successful network, a sense of mutual responsibility emerges and all the active members do a considerable amount of sharing. Those who tend not to share also tend to drop out of these voluntary learning groups. As the group develops, it may hold regular meetings of all the members or may meet sporadically. Usually, there will not be an outside speaker; network members feel they gain needed learning experiences through conferences and public seminars. Rather, networking is an activity wherein peers meet to share experiences and insights.

In many cases, the early form of networking consisted of an annual or semiannual meeting of HRD people from different parts of the country. There was no set agenda, but just the opportunity to talk to each other. Most of the early groups have disappeared and others have arisen to take their places. During the 1970s, many of these were informal learning groups for HRD people who just wanted somebody to talk to without having to go hear a lecture or see a film.

The process of networking has greatly expanded and become more sophisticated. There is still very little that one can find in publications about these networks. Perhaps this is good for, if they are subjected to too much research or examination, they may well disappear.

As technology affects HRD, new forms of networking have begun to emerge. Among these are user groups, computer conferencing, the electronic bulletin board, and teleconferencing. Use of such technologies is not limited to HRD people, but it certainly provides a significant opportunity for those who feel isolated because they actually are alone or because they are members of a small group within their business or industry organization.

Many of the networks have been formed by people who have attended the same public seminar and desire to maintain contact in the future. Others have arisen from the national conferences or professional societies. As can be expected, students enrolled in the same HRD degree programs have developed networking mechanisms to "stay in touch."

COOPERATION AND LINKAGES

Up to this point, this paper has focused on the HRD person as the learner. Obviously, the major purpose of HRD is to provide learning for others. Therefore, let us examine the issue of cooperation and linkage between the postsecondary institutions and business and industry in providing HRD for employees.

Perceptions and Misperceptions

Unfortunately, there seems to be an undercurrent of antagonism in the relationships between colleges and universities and business and industry. As will be indicated later, that is not what actually exists. First, however, let us look at some of these perceptions as they cloud the possibilities of cooperation and linkages.

In a paper presented at a meeting of the American Association for Higher Education, Mathis (1977) made the point that business and industry value productivity but that education is not committed to making money. Perhaps this statement is an oversimplification, but similar ideas have been expressed so many times that it must be addressed.

There is no question that the private sector is interested in making money. Without profits they would not remain operational. But postsecondary institutions also seek to make money. Even state-supported institutions are expected to return a designated amount of money to the state treasury. In the private sector the net gain is called profit, while in the public sector (e.g., higher education institutions) it is called surplus. The need for financial support has become so critical in higher education that many institutions now have a development officer who is primarily looking for additional finances for the institution to cover funding deficits as well as produce a surplus.

In both the public and private sector there is a need to make income exceed expenses. Of course, it can be argued that the purpose of an organization in the private sector is to make money, but that misses the point. Business and industry can only make money if they provide goods or services that consumers want and for which they will pay. Is this really significantly different from the requirement for higher education institutions? Unless such institutions provide the learning that their consumers (students) want, those institutions are doomed to disappear. During the latter part of the 1970s, a number of institutions did close, with more closings predicted for the eighties.

There are, of course, philosophical differences between the private and public sectors, but these are sometimes overstated, leading to more

misperceptions. Rather than seek differences, it is more important to search for those areas where there can be cooperation and linkages. There are many. Indeed, a vast number of examples of cooperation can be found in the literature, and by no means are all the cooperative experiences reflected there. It is extremely wasteful to spend time, energy, and resources to determine if there should be cooperation and linkages. They exist. The challenge is how to learn from those that already exist and to explore other areas of mutual benefit.

Secondary Schools

There has been cooperation with business and industry at various levels of education from the secondary to the university level. Discussion here of relations between business and industry and the secondary schools will be brief, not because this area is unimportant, but rather because the focus of this publication is on postsecondary institutions.

One of the major areas that secondary programs have been designed to address is the bridge between school and work. Although all the problems of making the transition from school to work have never been clearly defined, a variety of programs has been developed to try to ease this transition. Too frequently, the programs have consisted of school people talking to other school people, with only an occasional representative from business and industry.

During the 1960s and 1970s, the U.S. Office of Education stimulated the development of what was termed "career education." The focus of career education was to meet the needs of those secondary students who would be entering the work force rather than going to college. Toward the end of the seventies, for a variety of reasons, such programs were barely visible at both the local and national levels. Some good programs were developed, but most did not persist.

There have been various local programs, without outside support, that were concerned with the transition from school to work. For example, the Boston University School of Education cooperated with twelve surrounding school systems and the Raytheon Data Systems Company (Resnick and White 1979). The variety of program objectives was interesting and included work experience for teachers and the establishment of specific courses in schools to prepare youth for the transition from school to work.

There has been an extensive network of local councils trying to facilitate the school-to-work transition. Rudick (1979) compiled a list of these, and although it may be out-of-date today, the list does indicate the wide range of geographical locations in which these councils have operated.

The variety of cooperative programs possible between secondary schools and business and industry is extensive. One report (Purcell 1981) included such activities as a career internship program, a minority entrepreneurship program, and an adopt-a-school program.

Cooperation at the Postsecondary Level

The following examples are presented to demonstrate that a significant amount of cooperation at the postsecondary level has already taken place. In addition, it may provide readers with ideas to use at their own institutions or organizations. The impetus for cooperation and linkage can come from either business and industry or from the postsecondary institutions. Sometimes it is reassuring to know that others have engaged successfully in cooperative ventures, since the knowledge may facilitate getting the support of higher administrative levels when such cooperation is suggested.

There are many organizations involved in fostering cooperative efforts. Some have cooperation as their specific goal while others have moved toward cooperative arrangements as the need has become more obvious. The National Center for Higher Education Management Systems (NCHEMS) is a nonprofit corporation that has worked for several years to help colleges and universities improve their management capability. Recently, however, the organization has also moved into the area of industry-education cooperation. In February, 1983, for example, it sponsored a national meeting on "Higher Education and Industry: Managing the Partnership." The National Association for Industry-Education Cooperation has also been active over many years in encouraging such cooperation.

Mutual Perceptions

Cooperation takes place in many general ways that may be mutually beneficial. According to Huddleston (1982), it is essential that leaders in community and technical colleges develop a better understanding of HRD in business and industry. This understanding must be coupled with the ability of community and technical colleges to respond rapidly to the HRD needs of business and industry. Traditional ways of dividing up the school year (e.g., semesters) do not adequately meet the immediate needs of business and industry. By holding to the semester division institutions of higher education are perceived by business and industry to be extremely rigid and not really interested in developing a mutual relationship.

Location

For more than a century, higher education institutions in the United States have been taking many of their offerings off campus. It is surprising, therefore, to find some faculty and administrators who still insist that the learner must come to the institution.

Parnell and Yarrington (1982) have developed brief descriptions of cooperative arrangements between community colleges and local business, industry, and unions. They describe cooperative ventures involving thirty-eight community colleges, in twenty-three states. Many of these programs are conducted at the site of the employer or union.

Many of the sites and facilities available at higher education institutions may not be known by individuals in business and industry. After all, when they were students attending those institutions, they may have seen only traditional classrooms and perhaps a study room in the student center. As students, they had infrequent contact with some of the other conference-type facilities available at the institution. In addition, some of the people in business and industry have been out of college for many years and, therefore, may not be familiar with some of the outstanding conference facilities that have been constructed in many higher education institutions over the past fifteen years.

The reverse is also true. Too few people in higher education institutions are familiar with the learning centers that have been constructed by some of the leading organizations in business and industry. Some of those centers contain the most up-to-date and sophisticated learning equipment to be found anywhere.

Scheduling

Many people are familiar with flextime, an arrangement in which employees can arrive or leave work at times they select. When flextime is implemented, all employees are usually expected to be present during a period of core time--generally the middle of the work day. The practice of flextime has proven beneficial to both employers and employees and its use is gaining momentum.

Flextime, however, is only one part of a broader picture that extends to flexweek, flexmonth, and even to flexyear. Academics know this concept more familiarly as the sabbatical, and now the term "worker sabbaticals" is becoming familiar. The entire concept is known as alternative work scheduling (Shore 1980).

Through careful planning, it is possible for business and industry to allow employees to use flextime to participate in learning that is provided for adults at other than usual hours (Warmbrod 1979). This also requires that the postsecondary institution give careful thought to scheduling. The traditional hours for classes that were considered appropriate in the past may no longer suffice today. There are probably many different configurations that must be explored in order to reflect both the changing freedoms and constraints on time in the work place.

Training for Category II

In a previous section of this paper, there was a discussion of the various categories of HRD people. In the section on preparation, attention was focused on category I--professionally identified people. As noted, the other categories also need learning experiences to help them fulfill their HRD responsibilities.

Moravian College in Pennsylvania has developed a model program for mentors (Katz and Schuehler 1981). These are supervisors or counselors from business and industry (category II), as well as from other parts of the community. These mentors are to advise, or are advising, employees as to how they may use various instructional resources for training and education; the Moravian College program then provides them with training.

Local Councils

Local business/industry councils or committees have been viable community organizations for some time, but the idea of cooperating with such councils has not always been readily accepted by leaders in higher education institutions. Unfortunately, individuals in some institutions of higher education have felt that educators have the answers and that students should come to the institution to receive what is being offered. Fortunately, there are many leaders in the postsecondary field who recognize that learning opportunities should be explored jointly with others--in this case, with the employers.

Research

There is general agreement that more research is needed in HRD. Some areas have been identified (Nadler 1979b) and new areas are constantly opening up (Critical Research Issues Facing HRD 1982). Postsecondary institutions have the resources to conduct such research, and they are doing some. Business and industry also conduct a limited amount of research. Actually, many large corporations have a unit focusing on "human resources [personnel] research" and they have done some very interesting work. Generally, however, their work is not made available to the public or to others who could benefit from it.

Cooperative research efforts on various aspects of HRD would be beneficial to all concerned. As is evident, the literature in this area is sparse. As the number of HRD programs in colleges and universities increases there will likely be an increase in the research focused specifically on such aspects of HRD as adult learning, instructional strategies, and so forth. Research is an area where the postsecondary institutions may have to take the lead to encourage cooperation, keeping in mind that business and industry will not be interested in making resources available unless management can see the benefits to be derived.

Transfer of Credit

In our society, it is apparent that credit for learning is attractive. The desire for credit has led to a variety of efforts to find ways to grant credit for learning that are accepted by institutions other than the organization providing the learning.

An early effort was made in this direction during World War II, when a handbook was provided to information and education officers to assist them in

advising military personnel. Using the handbook, it was possible to relate a military learning experience to a similar one being offered by schools, colleges, and universities, and to recommend what credits might be given by secondary and higher education institutions.

A similar but more recent effort is that of the American Council on Education (ACE) through its program on Noncollegiate Learning (Sullivan 1975). ACE publishes a periodic report on those programs being offered by nonschool organizations that meet academic standards. Although it is a good effort and one that should be carefully explored by postsecondary institutions, it does present some problems and concerns for HRD people (Nadler 1975). However, these should not be considered insurmountable.

In addition, other efforts have been made that attempt to cope with the problem of granting credit based on outside experience. A consortium has been established to enable selected Naval personnel to pursue courses related to HRD in various higher education institutions located in different parts of the country. Therefore, when the learner transfers to a new station and enrolls in a different program, the credits could be transferred.*

The Council on Interinstitutional Leadership (Boyes 1981) has recognized that the problem of transfer must be addressed if HRD is to be helpful to a work force that is on the move. This is particularly significant when the learner wants or needs academic credit.

The Educational Testing Service (ETS) has been concerned with the transfer of credit for many years, and has endeavored to accomplish it through an "education passport" system. Unfortunately, the system has never gained significant acceptance. However, ETS is involved in other projects to help in the assessment of learning and life experiences that may be used for credit (See for example, Ekstrom, Wilder, and Hardy 1979; Ekstrom and others 1981).

Exchange of Personnel

One idea that has received too little attention is the possibility of exchanging personnel between business and industry organizations and higher education institutions. The Vocational Education Act of 1968 and its later versions provide for such exchanges, but little has been done to implement that section of the act. There have been exchanges that have not been supported by the act. It is a practice that has much to offer to all concerned.

In the 1950s, the Industrial and Labor Relations School at Cornell University encouraged its faculty to take jobs in business and industry during the summer. These positions could be blue-collar jobs as well as traditional "consulting." The focus was on providing the participants with actual and current work experience.*

---

*Information based on author's personal knowledge.

IBM is noted for its program of assigning regular employees to teach in higher education institutions that have a large population of minority or handicapped students. IBM sees this practice as a community service, but it also increases points of contact between people in the private sector and those in institutions of higher education.*

Cooperative Agreements

When higher education institutions work with business and industry, there must be a clarification of that relationship. Some insist on putting it in writing. Although such contracts may be necessary, they generally require an inordinate amount of time for negotiation. Whenever possible, the written agreement should be kept simple and specific. People in the private sector involved with providing learning are not particularly interested in spending valuable time in lengthy negotiations.

There are times, though, when written agreements are necessary and helpful. One study (Peart 1977b) found that although the literature advocates that agreements be written, a substantial number of cooperative programs rely on oral agreements. Of course, in apprenticeship programs, written agreements are almost mandatory, for such agreements are usually registered with a state or federal agency. When written agreements are essential, it is helpful to look at some of those that have been used in the past (Peart 1977a).

Examples of Cooperation

A great deal has been said about the need for cooperation between business and industry and higher education institutions. Less has been said about what has been happening over the past decade, as well as current practices. There is a great deal of cooperation, but only part of it is reported in the literature. Using the literature, it is possible to provide specific examples of such cooperation.

The examples that follow are offered as a stimulus and a basis for more cooperative efforts between business and industry and education. Some of the examples indicate areas where the possibilities for replication are obvious. Other examples serve to stimulate thought (and possibly action) to build more cooperative efforts for mutual advantage. In addition to the cited examples, other sources that provide listings of such cooperative efforts as well as more examples include Beder, Darkenwald, and Scanlan 1980; Bulpitt 1980; and "Cooperative Programs with Business and Community" 1980.

Knowing Each Other

One of the difficulties in establishing a cooperative effort is the need for both sides to know more about each other. Such knowledge can serve to

---

*Information based on author's personal knowledge.

reduce the misperceptions and to increase the possibility of a satisfactory relationship. When the Comprehensive Employment and Training Act (CETA) was in effect, the Human Resources Institute of the State University of New York at Buffalo organized a graduate-level course that attracted both providers of learning and industry personnel (Pautler 1978). An interesting learning strategy employed in the course was to involve participants in working together on small research projects focusing on areas of mutual concern.

A significant effort in the area of promoting understanding between business and industry and education was a study conducted by the state of Ohio. The study's purpose was to enable higher education to organize as an effective partner of government and of the private sector (Pipho 1982; Pruitt 1982). From a review of the literature, it appears that Ohio is providing significant leadership to the states in developing ways for business and industry and higher education institutions to work together.

Continuing Education

Many colleges and universities are involved in providing learning programs outside of the regular academic offerings. The programs are generally offered under the auspices of "continuing education" or "adult education" departments and provide a number of courses suitable for employed persons. One example of this widespread practice is cited below.

Homisak (1970) studied ten Pennsylvania community colleges as well as 120 employers to determine the provision of continuing education for employed individuals. The study concluded that the community colleges were offering a wide variety of courses to people currently employed. The research found that the continuing education programs were providing 42 percent of all the courses that the sampled companies considered relevant for their production workers.

Adult Basic Education (ABE)

From 1965 until fairly recently, one of the major areas of cooperation has been in providing learning for workers who had not completed high school or who lacked the basic communication skills associated with a high school diploma. This activity is a part of what was described earlier as compensatory HRD. It is an area in which a great deal of cooperation occurred, though usually, the cooperation was between business and industry and the public schools. Most higher education institutions were not significantly involved in providing adult basic education (ABE), as they did not consider ABE a functional area for higher education.

There are examples, however, of some community colleges that did participate. Moore, Granger, and Winkfield (1975) developed case studies that provided in-depth analysis of these programs. Although most of the programs they cited are no longer in existence, they are valuable today as specific examples of cooperation that was beneficial to the private sector, the colleges, and certainly to the learners.

Women

Another special group that has benefited from cooperation between the two sectors is women seeking advancement or career changes. In the banking industry, a program has been developed collaboratively between the National Association of Bank Women and five colleges in different parts of the country (Thomas and Parker 1978). One element of the innovative program addresses the college residence requirements by providing two-week, semiannual institutes.

Delivery System

HRD focuses on individuals who are already in the work force. If there are to be cooperative efforts, it is necessary for higher education institutions to modify some of the ways in which learning has been delivered previously. In fact, it will be necessary for those institutions to make many adjustments in their educational delivery systems.

It can be argued that it is the businesses and industries that should change, but this argument ignores the fact that such organizations are not primarily concerned with providing learning for their employees. Therefore, consideration should be given to bringing the learning to the work site. For example, Parkersburg (West Virginia) Community College designed a program to provide blue-collar workers with learning experiences at the work site (Fund for the Improvement of Postsecondary Education...1979).

Cooperative Planning

In thinking about cooperative efforts, consideration must be given to utilizing a process in which the business and industry groups and the higher education institutions can plan cooperatively. There is little doubt that people involved in the planning process will be more likely to support the plan and the outcomes.

Cuyahoga Community College (CCC) in Cleveland, Ohio, has used this approach and has established nine task forces (composed of CCC staff and members from companies and organizations) in their service area (Planning for the 80's 1980). The planning group has made numerous recommendations, one of which is to maintain cooperative relationships with the business community. Since the recommendation originated with this planning group, it has had much more force than if only the leaders from higher education had asked for such cooperative relationships.

Tuition Assistance

There are many business and industry organizations that make financial resources available to their employees for learning, particularly if it is job-related. There are many variations of providing tuition assistance. In some cases, employees receive purchase vouchers or similar documents to present to the institution in lieu of tuition payment at the time of

registration. The institution then bills the employer. A different approach is to have the employees pay the fees and then apply to the employer for reimbursement. Some organizations tie reimbursement to the grade achieved.

A program that has received national attention is that of the Kimberly-Clark Corporation (Rosow 1979). One reason for the attention is the level of participation. It is estimated that only about 4 percent of the work force nationally takes advantage of such programs offered by business and industry. At Kimberly-Clark, the figure in 1978 was about 30 percent. Part of the success is attributed to the extremely supportive corporate climate.

Tuition assistance programs frequently require some modifications in the usual procedures for registering students. For example, registrars may need to accept receipts other than the usual cash, check, or credit card at the time of registration. At the termination of the learning experience, students may require official grade reports immediately in order to submit them to the company for reimbursement. None of these changes are monumental, but if they are not built into the system of the higher education institution, some potential students from business and industry may not be able to use tuition assistance programs.

THE FUTURE OF HRD

Much has been written about the future of higher education. Relevant topics are discussed at almost every conference and meeting of personnel from institutions of higher education. Less is known about the future of HRD, so this chapter of the publication considers at least some of the possibilities. The future of HRD is very hazy, because HRD does not exist separate from other forces. It reflects the changes in the economic situation, in demographic changes, in the international marketplace, and so forth. Furthermore, in discussing the future of any field it must be recognized that future trends do not run in independent, straight lines. A projected future for almost any trend will be affected by concurrent events in other areas. A new invention or discovery may alter significantly what seems a future inevitability.

Productivity

A key word that has come into the vocabulary in the past decade is productivity. There is still too little agreement about what it means and only a few publications have explored it in depth (Mundel 1982). There is agreement, however, that business and industry must find ways of working more effectively, particularly by not wasting human resources (Cunningham 1981).

The pressure to improve productivity is stronger now than ever before, and this will continue. There are various ways to increase productivity, and learning is one of them. It becomes important for all concerned to identify those HRD experiences that can increase productivity. Increasing productivity is not the sole purpose of HRD, but if productivity is not increased, many more businesses and industries will suffer shutdowns and layoffs.

Unemployment

It is quite probable than unemployment will be with us through most of the 1980s. In the early years of the eighties, the United States has experienced the highest rate of unemployment since the Great Depression. Although there have been intermittent periods of unemployment between the 1930s and the 1980s, the recent period has been much different.*

---

*The purpose here is not to discuss the validity of the unemployment figures, how they are calculated, and who is included versus who is ignored. When the focus is on the people who are not working, the symptom, not the cause, is central.

There are two unique contributing factors affecting unemployment in the early eighties that are different from anything experienced previously. The first factor is productivity. To understand productivity as a cause of unemployment, the difference between "production" and "productivity" must be recognized. It is fairly easy for a business or industry to increase production. More people are hired, additional equipment is purchased, or more overtime authorized. All of these actions can increase production, but do nothing about productivity.

The essence of productivity is to produce the same goods and services at a lower cost per unit. This can be accomplished in many ways, but the final result is that fewer employees are needed to produce the same amount of goods and services. Therefore, an increase in productivity can bring about an increase in unemployment. As American businesses and industries strive to compete with foreign competition, increasing productivity is a major effort. (This movement has sometimes been called "reindustrialization.") It should come as no surprise that one result of these productivity efforts is increased unemployment.

Another factor that has contributed to unemployment is the rapid introduction of advanced technology. In the early 1960s, there was great concern about automation. It was thought that the new intervention of automated systems would produce vast unemployment. To cope with this problem, a significant piece of legislation was passed in 1962, the Manpower Development and Training Act (MDTA). MDTA's original focus was not to provide training for the minorities or the disadvantaged, but for members of the skilled work force who might be displaced by automation. In fact, there was little displacement at that time. By 1964, the MDTA was revised and its purpose became parallel to that of the Economic Opportunity Act of 1964.

By the 1980s, however, the work place was being changed by the increased use of computers and the rapid introduction of robotics. Although it is too early to be certain, it appears that twenty years after those initial fears in the sixties, the threat to jobs is becoming a reality. People are losing their jobs and are being replaced by machines. The significance, in terms of unemployment, is that those jobs that are lost to humans are probably lost forever.

Economists refer to this phenomenon as structural unemployment; that is, the structure of the work place has changed and this has caused unemployment. Therefore, it is not possible to treat the unemployment of the 1980s as we have done with previous periods of unemployment. It is not a matter of making "the economy get better," because when the economy does improve, the work force will need people with much different skills from those needed at the outset of the current recession.

Such changes represent a tremendous challenge to business and industry, and to the higher education institutions. During the 1980s, there will be a great need to help people move, rather rapidly, from their old jobs or unemployment into the new ones that will open up as a result of the structural changes. For example, there will be a need for a significant number of people who can repair the robots.

The work place is changing as we move from a production society to a service and information society. The change will accelerate in the latter part of the 1980s, as more robots are introduced to perform some of the basic blue-collar jobs of the past. Even some of the more skilled jobs (e.g., welding) will be taken over by robots.

There are many possibilities for cooperation between business and industry and higher education institutions that need to be identified by the two groups, working together. This is essential if we are not to face a violent change in our social structure.

Alternative Work Sites

Earlier in this publication is a discussion of alternative work scheduling. Another aspect to be considered is where work will take place. Toffler (1980) has introduced the concept of the electronic cottage, in which people work at home. Electronic cottages are not really in the future; they already exist.

For the future, the difference is in the dimension of this activity. From one perspective, an increasing number of people will be working at home. The advent of the microcomputer in the last part of the 1970s means that many people have the possibility of a work station at home.

Of course, not all jobs can be done at home. We are in the midst of a change, and its outcome is not completely predictable. As the work force moves towards service and information, new kinds of jobs will be created. Even in some of these, the intervention of robotics will be seen. Yet, at this time, the projection is that more work will be done away from traditional settings.

Another factor that influences the trend toward working at home is the increase in the number of dual-career couples. A "home husband" is still the subject of ridicule and innuendos, but that attitude is changing and will change even more. As the home is no longer seen as the domain of only the wife and those children who have not entered the work force, working at home will become more acceptable for all concerned.

We can expect that more women will be working at home in professional or semiprofessional capacities. Working at home will no longer be seen as a hobby. It will be accepted that a woman or man can work at home using electronic technology, be part of the work force, and take care of other chores. Working at home may result in more women in the work force for longer periods of time, which may have an impact on the rate of unemployment (an example of how one factor can influence another).

In addition to the electronic cottage, there will also be job-related "satellites." Satellites is a term for an emerging trend in which some jobs continue to require several people working together in a face-to-face relationship, but in which the work will not have to take place at the traditional office. The high-rise office buildings that are prevalent in our larger

cities will not disappear, but people will have an alternative work site and will be able to work in smaller settings in peripheral (i.e., suburban, rural) areas. They will be tied into other satellites and to the headquarters of their organizations, though physically they may not actually meet individuals from other locations except at the annual company picnic.

For HRD and for the higher educational institutions, there is tremendous significance in this expanding trend. Many HRD people have fought against the introduction of computer-based learning systems. With a terminal or a computer in each home or at each desk, such behavior on the part of HRD people will be considered as aberrant.

There is a great deal to be learned about using the computer for learning, and higher education institutions can work with business and industry to explore this area for their mutual benefit. Today, for the most part, the computer is used merely as a different means of presenting the printed page, but there are significant advances that allow the computer to be used interactively, functioning as more than merely a hyperactive printing device.

If the alternative work sites are to be provided with learning, then the usual delivery systems of higher education institutions will have to change. Currently, significant work is being done in that area that deserves the attention of all concerned with HRD.

Another dimension of learning and alternative sites deserves consideration. Many years ago, Cyril Houle (1961) presented a model that has served very well. Although it has been embellished by others, the core model classified the orientations of adults entering learning experiences as follows:

- o Goal-oriented--The adult wants to learn in order to use the learning for some specific goal, such as to solve a problem, or to get a better job.

- o Learning-oriented--The adult enjoys the experience of learning and does not particularly care about the subject matter nor does he/she intend to use it. The experience of learning is satisfying enough.

- o Socially-oriented--The adult enjoys the company of others and becomes involved in learning in order to be able to enjoy that company in a stimulating environment.

The last category, socially-oriented, is more important than is sometimes recognized by those providing learning experiences. If any evidence is needed, there are several observable behaviors that can be identified. What happens during breaks in a class session? A great deal of socializing. What happens outside of class that few instructors are aware of? Parties, coffees, teas, picnics, and outings of adults who meet in class and who want to continue the social experience, are frequent outgrowths of learning experiences.

Given this need, there are adults who will want learning experiences that provide them with social opportunities that they cannot derive from learning at an alternative work site. It is not a question of which is more desirable, but rather, that both opportunities should be provided for the adult learner.

Demographics

It is now obvious that the makeup of the work force is changing and will continue to do so until at least the year 2000. The reason for using that time frame is that anybody who will be in the work force between now and the year 2000 has already been born. It is not difficult, then, to see what the work force should look like for approximately the next eighteen years.

The work force is getting older. The work force has the highest average level of schooling in history. It is common knowledge that the more schooling people have, the more learning activities in which they will want to engage. Too little is known about older workers and their learning needs, but they probably will be seeking increased opportunities for learning and will look to their employers for some of these.

Changing employee expectations about work are already starting to emerge under the broad rubric of "quality of work life." One aspect of this activity is that people want more from the work place than just work. It will not be unusual to find an increased number of businesses and industries providing learning just because people want to learn. (This was earlier defined as development). Right now, for economic and related reasons, the emphasis is on training and education. It is probable that during this decade there will be more organizations in the private sector offering development opportunities for their employees. Obviously, the institutions of higher education are well equipped to meet this need.

Another aspect of the demographic change relates to retirement. In the past, retirement has often been an extremely traumatic experience, but it need not be. It is possible to prepare people, through learning, for retirement (Schaaf 1981). Related to retirement is outplacement, the practice of helping employees move from one organization to another. At one time, this effort was limited to executives and managers. One result of the economic recession of the early 1980s has been the extension by some companies of outplacement programs to employees at all levels of the organization. Although retirement and outplacement are not HRD functions, the HRD people can make a significant contribution when learning is utilized as one aspect of those practices.

The HRD Practitioner

Increased attention by business and industry to the HRD function will require that HRD practitioners improve their competencies. Until there is agreement on what body of knowledge constitutes HRD, it is doubtful whether there will be a significant advance in increasing competencies. When it does come, it will undoubtedly be influenced by the higher education institutions.

In order to exert such influence, the higher education institutions must increase cooperation with business and industry. The partnership has already begun to evolve.*

---

*See the examples in the Bibliography.

More sound academic programs for HRD people will develop. HRD practitioners who have benefited from academic experiences will tend to be less hostile than some of the present HRD people who lack an academic background. This may facilitate cooperative efforts, particularly if the academic experiences have helped the HRD people in their careers.

Working together, business and industry and higher education institutions can enable human resource development to make an increased contribution to the development of the individual, the economy, and our society.

REFERENCES

Anderson, C. F. An Historical Approach to the Relationship between Adult Education and the Workplace: Path to Empowerment in the 80s. Unpublished paper, University of Michigan, December 1980. (ERIC Document Reproduction Service No. ED 215 075).

Anderson, C. F. The Post-Industrial Organization as a Learning Center. Unpublished paper, University of Michigan, November 1981. (ERIC Document Reproduction Service ED 210 558).

Asinof, L. "Offbeat Talks Part of Routine at Bell Labs." Wall Street Journal, November 16, 1982, p. 35.

ASTD Directory of Academic Programs. Washington, DC: American Society for Training and Development, 1983.

Beder, H. W.; Darkenwald, G.; and Scanlan, C. Cooperation Between Educational Institutions and Business and Industry in Adult Education and Training. Research Monograph no. 4. New Brunswick, NJ: Graduate School of Education, Rutgers, The State University, 1980. (ERIC Document Reproduction Service No. ED 204 611).

Berg, I. Education and Jobs: The Great Training Robbery. New York: Praeger Publishers, 1970.

Boyes, R. L. Corporations and Interinstitutional Cooperation in Higher Education. Paper presented at the annual meeting of the Council on Interinstitutional Leadership, Racine, WI, March 1981. (ERIC Document Reproduction Service No. ED 217 757).

Bulpitt, M., ed. It's Your Business! Cooperative Efforts between Community Colleges and Business/Industry. Dallas, TX: League for Innovation in the Community College, and Phoenix, AZ: Maricopa County Community College District, June 1980. (ERIC Document Reproduction Service No. ED 208 240).

Carlson, J. B., and Lockwood, J. R. "Human Service Educators in the Business World." Journal of Teacher Education 31 (September-October 1980): 27-30. (ERIC No. EJ 239 478).

Chalofsky, N., and Lincoln, C. I. Up the HRD Ladder: A Guide for Professional Growth. Reading, MA: Addison-Wesley, 1983.

"Cooperative Programs with Business and Community." In Forum, Vol. 2, no. 7. Washington, DC: Association of American Colleges, May 1980. (ERIC Document Reproduction Service No. ED 187 233).

Critical Research Issues Facing HRD. Vol. 9, Research Series. Washington, DC: American Society for Training and Development, 1982.

Cunningham, M. E. "Productivity and the Corporate Culture." Vital Speeches (April 1981): 363-367.

Ekstrom, R. B.; Gruenberg, C. B.; Sugerman, R. A.; Davis, E. D.; Marrow, B. A.; and Beier, J. J. Relating Women's Experience and Skills to Competencies Required in Selected Occupations and Vocational Education Programs. Project Report, Task C1, Revised Competency Analysis: Credentialing Women's Life Experience (Project ACCESS). Princeton, NJ: Educational Testing Service, July 1981. (ERIC Document Reproduction Service No. ED 204 553).

Ekstrom, R. B.; Wilder, G.; and Hardy, F. Furthering the Recognition of Women's Career-Relevant Skills. (Project HAVE Skills.) Interim Report. Princeton, NJ: Educational Testing Service, October 1979. (ERIC Document Reproduction Service No. ED 190 778).

Fey, C. "Training Internships: A Bargain for Everyone." Training 18 (April 1981): 35-36, 38. (ERIC No. EJ 243 476).

Fund for the Improvement of Postsecondary Education (FIPSE) Project. Final Report FY 78-79. Parkersburg, WV: Parkersburg Community College, 1979. (ERIC Document Reproduction Service No. ED 172 850).

Gotbaum, V. "Training for Transition: A Union View." Change 11 (July-August 1979): 44-45. (ERIC No. EJ 206 705).

Granger, J. C., and Moore, A. B. "Cooperative Adult Education--The Future Is Now." Training and Development Journal 30 (January 1976): 34-35. (ERIC No. EJ 130 631).

Homisak, W. A Study of the Industrial-Technical Education Provided through the Continuing Education and Community Service Programs in the Pennsylvania Community Colleges. Doctoral dissertation, Pennsylvania State University, 1970. (ERIC Document Reproduction Service No. ED 063 933).

Houle, C. The Inquiring Mind. Madison: University of Wisconsin Press, 1961.

Huddleston, K. F. The Efforts of Business to Improve Human Productivity and Quality of Work Life: Training Implications for Community and Technical Colleges. Columbus: National Center for Research in Vocational Education, The Ohio State University, 1982. (ERIC Document Reproduction Service No. ED 217 149).

Katz, R. S., and Schuehler, S. S. Mentor Training in the Lehigh Valley. Bethlehem, PA: Moravian College, 1981. (ERIC Document Reproduction Service No. ED 211 718).

Knowles, M. The Modern Practice of Adult Education: Andragogy versus Pedagogy. New York: Associat on Press, 1970.

Mathis, B. C. Faculty Development as Human Resource Development. Paper presented at a meeting of the American Association for Higher Education, Chicago, IL, March 22, 1977. (ERIC Document Reproduction Service No. ED 158 677).

McLagan, P. A. "The ASTD Training & Development Competency Study: A Model Building Challenge." Training and Development Journal 36 (May 1982): 18-24.

McMahon, J. A Study of Selected Universities in the United States Offering Graduate Degree Programs in Human Resource Development. Unpublished doctoral dissertation, School of Education and Human Resource Development, The George Washington University, 1982.

Moore, A.; Granger, J.; and Winkfield, P., eds. Case Studies of Selected Cooperative Adult Education Programs. Columbus: Center for Vocational Education, The Ohio State University, 1975. (ERIC Document Reproduction Service No. ED 122 124).

Mundel, M. E. Improving Productivity and Effectiveness. Englewood, NJ: Prentice-Hall, 1982.

Nadler, L. "Learning Community Groups within an Organization." Training and Development Journal 35 (July 1981): 20-25.

_____. "A Model for Professional Development." Training and Development Journal 34 (May 1980a): 14-22. (ERIC No. EJ 229 598).

_____. Corporate Human Resources Development. New York: Van Nostrand, 1980b.

_____. Developing Human Resources. 2d ed. Austin, TX: Learning Concepts, 1979a.

_____. "Research: An HRD Activity Area." Training and Development Journal 33 (May 1979b): 60-64. (ERIC No. EJ 202 771).

_____. "Recognition of Noncollegiate Learning Experiences." Training and Development Journal 29 (July 1975): 8-11. (ERIC No. EJ 120 529).

_____. "Implications of the HRD Concept." Training and Development Journal 28 (May 1974): 3-13. (ERIC No. EJ 097 401).

_____. Employee Training in Japan. Los Angeles, CA: Education and Training Consultants, 1965.

Neuschel, R. P.; Fafunwa, A.; Bigala, J.; and Petracek, S. Linking Education to the Economy. Washington, DC: International Council on Education for Teaching, 1981. (ERIC Document Reproduction Service No. ED 212 599).

Ouchi, W. Theory Z: How American Business Can Meet the Japanese Challenge. Reading, MA: Addison-Wesley, 1981.

Parnell, D., and Yarrington, R. Proven Partners: Business, Labor, and Community Colleges. AAAJC Pocket Reader 1. Washington, DC: American Association of Community and Junior Colleges, 1982. (ERIC Document Reproduction Service No. ED 214 582).

Paulsen, R. Short Term Skill Training: Alternative Approaches. Information Series no. 222. Columbus: National Center for Research in Vocational Education, The Ohio State University, 1981. (ERIC Document Reproduction Service No. ED 199 445).

Pautler, A. J., Jr. Vocational Education and the Delivery of Manpower Services: A Human Resource Management Course Monograph. No. 3. Buffalo: State University of New York, Human Resources Institute, 1978. (ERIC Document Reproduction Service No. ED 179 683).

Peart, E. E. An Assessment of Characteristics of Cooperative Agreements between Postsecondary Educational Institutions and Business, Industry, and Labor. Final Report. Greeley: University of Northern Colorado, College of Education, 1977a. (ERIC Document Reproduction Service No. ED 151 575).

Peart, E. E. Characteristics of Cooperative Agreements between Postsecondary Institutions and Business, Industry, and Labor. Annotated and Selected Bibliography. Final Report. Greeley: University of Northern Colorado, College of Education, 1977b. (ERIC Document Reproduction Service No. ED 151 570).

Pipho, C. "Education Forms Links with Business to Aid in Economic Revitalization." Phi Delta Kappan 64 (December 1982): 229-230.

Planning for the 80's: Workforce Educational Development Project Report. Cleveland, OH: Cuyahoga Community College, 1980. (ERIC Document Reproduction Service No. ED 197 796).

Pruitt, A. K., comp. Employer-Sponsored Instruction: Focus on Ohio Business and Industry. Columbus: Ohio Board of Regents, 1982. (ERIC Document Reproduction Service No. ED 218 459).

Purcell, E. A., ed. Partners for the 80's: Business and Education. Alexandria, VA: National School Volunteer Program, 1981. (ERIC Document Reproduction Service No. ED 208 222).

Pyle, R. L. "Performance Measure for a Corporate Fitness Program." Human Resource Management 18 (Fall 1979): 26-30.

Resnick, H. S., and White, W. "Developing Work and Education Partnerships: A Case Study." Training and Development Journal 33 (July 1979): 46-49.

Rosow, L. A. Kimberly-Clark Corporation's Educational Opportunities Plan: A Case Study. Worker Education and Training Policies Project. Washington, DC: National Institute for Work and Learning, 1979. (ERIC Document Reproduction Service No. ED 200 728).

Rudick, L., comp. Work Education Councils: Profiles of Collaborative Efforts. Washington, DC: National Institute for Work and Learning, 1979. (ERIC Document Reproduction Service No. ED 200 708).

Schaaf, D. "Are You Training Yet for Outplacement and Retirement?" Training 18 (May 1981): 79-81. (ERIC No. EJ 245 222).

Shore, J. Alternative Work Patterns: Implications for Worklife Education and Training. Worker Education and Training Policies Project. Washington, DC: National Institute for Work and Learning, 1980. (ERIC Document Reproduction Service No. ED 200 734).

Sullivan, J. J. "The Project on Noncollegiate-Sponsored Instruction." Training and Development Journal 29 (July 1975): 3-7. (ERIC No. EJ 120 528).

Thomas, K. R., and Parker, L. A. The Collaborative Educational Programs of the National Association of Bank Women: Mechanisms for Career Change. Cambridge, MA: Technical Education Research Center, 1978. (ERIC Document Reproduction Service No. ED 172 035).

Toffler, A. The Third Wave. New York: William Morrow and Company, 1980.

Warmbrod, C. P. Business-Industry-Labor Involvement in Lifelong Vocational-Technical Education. Columbus: National Center for Research in Vocational Education, The Ohio State University, 1979. (ERIC Document Reproduction Service No. ED 179 790).

Watkins, B. "Higher Education Now Big Business for Big Business." The Chronicle of Higher Education, April 13, 1983, pp. 1, 6.

BIBLIOGRAPHY

Beier, J. J., and Ekstrom, R. B. "Creating Employment Equity through the Recognition of Experiential Learning." Journal of Career Education 6 (September 1979): 2-11. (ERIC No. EJ 215 575).

Bonham, G. W. "Inching toward the Learning Society." Change 11 (July-August 1979): 3-4, 57. (ERIC No. EJ 206 698).

Buckholtz, M. W. "Keeping Up with a Revolution." American Education 17 (November 1981): 10-14. (ERIC No. EJ 255 961).

Burt, S. M. Industry and Vocational-Technical Education. New York: McGraw-Hill, 1967.

Cohen-Rosenthal, E. "Enriching Workers' Lives." Change 11 (July-August 1979): 64-66. (ERIC No. EJ 206 710).

Dennis, W. H. "Class at the Plant: A Program of University/Industry Cooperation." Voc Ed 53 (September 1978): 40-42. (ERIC No. EJ 191 932).

Fricano, P. "In-Plant Education: Cooperation between Industry and Colleges." Community Education Journal 5 (January-February 1975). (ERIC No. EJ 111 376).

Gammill, K. "Two Houston Companies Address Management Development." Texas Business Executive (Summer 1980): 25-27.

Garrison, D. C., and Korim, A. S. "Toward a National Policy for Human Resource Development and Economic Renewal." Community and Junior College Journal 52 (April 1982): 9-11. (ERIC No. EJ 263 498).

Gomberg, W. "Education and Leisure: New Curricula." Change 11 (July-August 1979): 30-34. (ERIC No. EJ 206 702).

Granger, J. C.; Moore, A. B.; and Winkfield, P. Discussion of Industry-Education Cooperation for Adult Learning. Columbus: Center for Vocational Education, The Ohio State University, 1975. (ERIC Document Reproduction Service No. ED 122 126).

Hamilton, J. A. Adapting Vocational Education to the 80's through Human Resource Development. Palo Alto, CA: American Institutes for Research in the Behavioral Sciences, 1982. (ERIC Document Reproduction Service No. ED 215 116).

Knowdell, R. L. "Educational Information in Industrial Settings." New Directions for Education and Work (Improving Educational Information Services) 5 (1979): 83-92. (ERIC No. EJ 206 660).

Long, T. E. "Human Resource Development: Who Is Accountable?" American Vocational Journal 47 (February 1972): 39-43. (ERIC No. EJ 052 483).

Martell, C. R., and Dougherty, R. M. "The Role of Continuing Education and Training in Human Resource Development: An Administrator's Viewpoint." Journal of Academic Librarianship 4 (July 1978): 151-155. (ERIC No. EJ 185 187).

Marshall, R. "Human Resource Policy in the 1980's." Advent (July 1981): 96-108.

McCaffery, R. P. "Degree Credits, Academic Learning, and Job Mobility for Adult Students through Field Experience." Alternative Higher Education: The Journal of Nontraditional Studies 5 (Winter 1980): 112-120. (ERIC No. EJ 242 647).

Moen, N. W., ed. "General College and Adult Learners." General College Newsletter, Vol. 26, no. 1. Minneapolis: General College, University of Minnesota, 1980. (ERIC Document Reproduction Service No. ED 191 360).

Raven, H. C., and LeFiles, D. C. "Fueling an Economy with Industrial Training." Voc Ed 54 (January 1979): 56-58. (ERIC No. EJ 199 173).

Rich, L. "24 Women: 24 Managers." Worklife 2 (November 1977): 24-26. (ERIC No. EJ 167 259).

Schmelter, H. B. Linking the Worker to Postsecondary Education: A Manual for Training Study Organizers in America. New York: College Entrance Examination Board, 1980. (ERIC Document Reproduction Service No. ED 191 416).

Snarponis, J. M., and Prien, J. D. "Engineering Guidance: A Human Resource Development." Professional Engineer 49 (March 1979): 32-33. (ERIC No. EJ 200 197).

Stetar, J. M. Higher Education and the Corporate Sector. Paper presented at the annual meeting of the American Association for Higher Education, Chicago, IL, 1975. (ERIC Document Reproduction Service No. ED 104 291).

Strengthening Postsecondary Work-Education Relationships in Ohio. Presentation Summary. Prepared for the National Association for Industry-Education Cooperation Business/Industry Showcase Conference. Columbus: Ohio Board of Regents, 1982. (ERIC Document Reproduction Service No. ED 218 458).

Stringer, H. E. "The Joint Role of Industry and Education in Human Resource Development." Journal of Industry-Education Cooperation 2 (1981): 34-41. (ERIC No. EJ 241 933).

Wilson, R. E., and Davis, D. E. "Putting the Nation on Notice." Community and Junior College Journal 52 (April 1982): 6-8. (ERIC No. EJ 263 497).

Yantis, J. T. "The University and Industry as Partners in Education." Phi Delta Kappan 60 (April 1979): 608. (ERIC No. EJ 197 960).

Yarrington, R., ed. Employee Training for Productivity: Report of a 1980 Assembly on Industry-Education Cooperation. Washington, DC: American Association of Community and Junior Colleges, 1980. (ERIC Document Reproduction Service No. ED 190 188).

Youngs, B. B., and Brooks, R. D. "Education and Business: Developing New Initiatives in Education-Work Relations." College Student Journal 13 (Summer 1979): 206-208. (ERIC No. EJ 207 791).